REMARKS/ARGUMENTS

Reconsideration of the application is requested.

Claims 1-6 remain in the application. Claims 1 and 2 have been amended.

In item 2 on page 2 of the above-mentioned Office action, claims 1 and 5-6 have been rejected as being unpatentable over Fujishima (US Pat. No. 6,066,863) in view of Burke (US Pat. 5,793,070) under 35 U.S.C. § 103(a).

In item 3 on page 3 of the above-mentioned Office action, claim 2 has been rejected as being unpatentable over Fujishima in view of Burke and further in view of Shekar et al. (US Pat. 5,317,171) under 35 U.S.C. § 103(a).

The rejections have been noted and claim 1 has been amended in an effort to even more clearly define the invention of the instant application. Support for the changes is found in Fig. 1 and the corresponding description in the specification.

Before discussing the prior art in detail, it is believed that a brief review of the invention as claimed, would be helpful.

Claim 1 calls for, inter alia:

> a first highly doped well zone of the first conductivity type and a second highly doped well zone of a second conductivity type, opposite to the first conductivity type, successively disposed between said drift zone and said semiconductor substrate providing an electrical PN insulation;
> ...
> said first well zone and said second well zone being electrically separated from said anode, said cathode, and said gate electrodes within said semiconductor body.

The invention of the instant application differs from Fujishima in the following aspects:

1) The region 414 of Fujishima, which is defined by the Examiner as a drift zone, is not a drift zone, but rather a collector region (see column 13, line 16 of Fujishima). Since the well zones 406 and 408 of Fujishima, as defined by the Examiner, are not embedded between a drift zone and a substrate, Fujishima does not disclose the feature that the first and second well zones are disposed between the drift zone and the substrate as recited in claim 1 of the instant application.

2) Even if a person skilled in the art would consider the region 414 as a drift zone, he or she could not arrive at the invention of the instant application in which the two oppositely doped well zones are embedded between the drift zone and the substrate. In Fujishima, the outer

one of the two well zones 406 is not connected to the substrate, but rather to a further well zone 403, which is doped opposite to the region 406. As a result, in Fujishima three well zones are embedded between the substrate 401 and the region 414 defined as a drift zone. In contrast, the invention of the instant application only has two well zones between the substrate and the drift zone of the IGBT.

3) The well zones of the invention of the instant application are highly doped, whereas Fujishima discloses a normal doping. According to the Examiner, it would be obvious for a person skilled in the art, after reading Burke, to change the doping of the well zones in order to reach the invention of the instant application. However, if a person skilled in the art would increase the doping of the well zones 408 and 406 of Fujishima according to the teaching of Burke, he or she would have to reduce the voltage sustaining capacity of the component because the doping of the two regions determines the central component value. In the invention of the instant application, the increase of the doping of the well zones (8, 9) has no influence on the voltage sustaining capacity of the component, rather it serves to reduce the substrate current. Therefore, a combination of Fujishima

and Burke does not lead a person skilled in the art to the invention of the instant application because the doping of the two well zones in Fujishima and in the invention of the instant application has a different effect on the component.

4) According to claim 1 of the instant application, the first highly doped well zone (8) of a first conductivity type and the second highly doped well zone (9) of a second conductivity type, opposite to the first conductivity type, are embedded in the drift zone (2) of the first conductivity type and the substrate (1) of first conductivity type. As can be seen in Fig. 1 of the instant application, neither of the two well zones (8, 9) is connected to an electrode of the emitter (or the cathode) or the collector (or the anode) through an adjacent semiconductor zone of the same conductivity type. This feature clearly separates the invention of the instant application from Fujishima in which the well zone 406 in Fig. 4 is connected to the emitter-electrode through the contact region 413 of the same conductivity type.

The above-mentioned feature has been incorporated into claim 1 in order to even more clearly define the

invention of the instant application and more clearly differentiate the invention of the instant application from the cited prior art references.

It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either show or suggest the features of claim 1. Claim 1 is, therefore, believed to be patentable over the art and since all of the dependent claims are dependent on claim 1, they are believed to be patentable as well.

Applicants acknowledge the Examiner's statement in item 4 on page 3 of the above-mentioned Office action that claims 3 and 4 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Since claim 1 is believed to be patentable as discussed above and claims 3-4 are dependent on claim 1, they are believed to be patentable in dependent form. A rewrite is therefore believed to be unnecessary at this time.

In view of the foregoing, reconsideration and allowance of claims 1-6 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate a telephone call so that, if possible, patentable language can be worked out. In the alternative, the entry of the amendment is requested as it is believed to place the application in better condition for appeal, without requiring extension of the field of search.

If an extension of time for this paper is required, petition for extension is herewith made. Please charge any fees which might be due with respect to 37 CFR Sections 1.16 and 1.17 to the Deposit Account of Lerner and Greenberg, P.A., No. 12-1099.

Respectfully submitted,

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October 20, 2004

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